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ABSTRACT

The purpose of the Basic Skills portion of this project was to improve the reading and mathematics skills of students in the Junior High Schools Transition program, grades 7 through 9, in 27 junior high schools and 4 middle or extended elementary schools. The goal of the Mathematics Teacher Resources Development portion of the project was to increase the capability of teachers to provide effective mathematics instruction to students, pre-kindergarten through 12th grade. This evaluation report describes the project and the evaluation model that was used to assess it. A narrative summary is presented of the program evaluation, setting forth specific program objectives and discussing how they were dealt with, and the outcomes of actions taken to achieve them. Supporting data and information in the appendices include: (1) planning, monitoring and implementing (PMI) evaluation model; (2) results of standardized tests; (3) basic skills monitoring guide; (4) teacher evaluation of their perceived effects of the Basic Skills Program and of their application of the program; (5) teacher ratings of project workshops; (6) results of the teacher evaluation of the Basic Skills Program; (7) needs assessment of mathematics teachers; (8) faculty evaluation forms; (9) summary evaluation of certification courses; and (10) evaluation summary of inservices. (JD)

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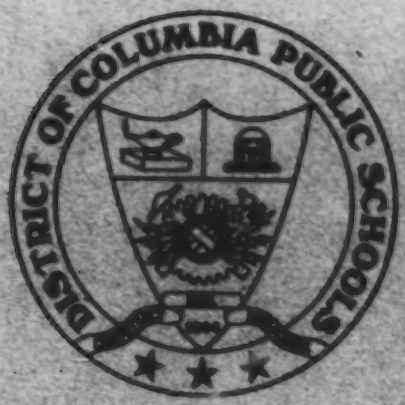

FINAL EVALUATION REPORT

for

IMPROVING BASIC SKILLS IN READING AND MATHEMATICS

E.C.I.A. CHAPTER 2

August 1986

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DISTRICT OF COLUMBIA PUBLIC SCHOOLS

IMPROVING BASIC SKILLS IN READING AND MATHEMATICS

FINAL REPORT

1985-1986

Prepared by
Division of Quality Assurance

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SUMMARY AND FINDINGS

Title

Improving Basic Skills in Reading and Mathematics

Project Coordinators

Vivian Carson, Laverne Glascoe and Gwendolyn Means

Project Manager

Dorothy C. Stephens

Project Location

The project office was located in the Instructional Services Center at Langdon School. Classes for Basic Skills were located in all junior high and selected middle and extended elementary schools in the District of Columbia Public Schools (DCPS). Courses for Mathematics Teacher Resource Development were offered in various schools and centers throughout the district.

Target Population

The target population for the Basic Skills portion of the project consisted of junior high students receiving reading or mathematics instruction or both for two semesters who are in the classes of junior high secondary student progress plan support teachers (SSPPST). The target population for the Mathematics Teacher Resource Development portion consisted of teachers of mathematics in the DCPS who are not certified as probationary or permanent mathematics teachers, those preparing to teach mathematics and those teaching mathematics who are minimally qualified and need to upgrade their skills.

Background

The original Basic Skills grant in 1980, was funded under ESEA Title II, Part B and concentrated on life skills of high school students, especially in the areas of verbal and written communication and math/money management. This program was superseded by the Education Consolidation and Improvement Act (ECIA) Chapter 2, Sub-Chapter A in 1982, with the emphasis shifting to the junior high school level for the strengthening of achievement in reading and mathematics, and to undertrained mathematics teachers throughout all levels. During the first year of the project, an attempt was made to establish Basic Skills Centers in all junior high and middle schools. When that did not prove feasible, the Basic Skills portion of the project shifted to providing training, materials and monitoring for transition teachers and their classes to supplement their program in the 1984-85 school year. Transition teachers generally worked with students who were two or more years below grade level and who needed extra help in order to reach the CBC objectives necessary to proceed to the next grade.

The Mathematics Teacher Resource Development portion of the project was deemed necessary to address the problems of the increasing decline in student mathematics scores, the occurrence of untrained mathematics teachers and the decline of persons entering the teaching field. These facts were found in studies throughout the United States, as well as in the DCPS, and summarized at the National Convocation on Pre-college Education in Mathematics and Science, held on May 12th and 13th, 1982. This led to the application for ECIA, Chapter 2 funding to plan a program that would help alleviate the problem in the DCPS. During the first year of the project, planning was completed, a symposium was held, proposals for additional funds were written and staff development/credit courses were taken by 167 teachers with 92 enrolled in the mathematics certification program.

Description of Project

For the Basic Skills component of the project, low achieving junior high students received extra help in reading and mathematics, with their individual needs determined through criterion-referenced tests. Individualized programs were established for each student as a supplemental learning experience. Extra instructional materials were supplied. Inservice training was given to participating teachers. Both pre and post criterion-referenced and norm-referenced standardized tests were given to measure student improvement in reading and mathematics during the school year.

The Mathematics Teachers Resource Development component of this project was set up to implement teacher training and upgrading in mathematics, mainly concentrating on secondary mathematics teachers who do not hold certification in mathematics, and providing them with needed inservice and college level courses in both mathematics and computer science through cooperation with local universities and the DCPS mathematics department. In addition, staff development activities were designed to assist mathematics teachers pre K-12 in developing teaching competencies in classroom management and planning for instruction, ultimately hoping that these newly acquired competencies by teachers would help their students acquire required skills in mathematics.

Stated Objectives

A: At least two-thirds of the junior high students who are in the classes of junior high secondary student progress plan support teachers (SSPPST) and who receive reading or mathematics instruction or both for two semesters during the 1985-86 year in the Improving Basic Skills in Reading and Mathematics program will acquire proficiencies in the majority of the skills in which they were found to be deficient, as measured by a criterion-referenced test. Also those students will improve their reading and mathematics skills relative to their achievement one year previous, as measured by a norm-referenced test.

B: By June 1986, after receiving the Improving Basic Skills in Reading and Mathematics program's staff development, instructional materials and instructional support from Assistant Directors of Reading and Mathematics, at least 80% of the project teachers will demonstrate their ability to work with skill-deficient students, as measured by monitoring guides and teacher evaluation questionnaires.

C: As a result of participation in the Mathematics Teacher Resource Development component of the Improving Basic Skills program, project teachers seeking mathematics certification will complete their needed courses or an average of three courses toward their certification.

D: As a result of participation in staff development events through the Mathematics Teacher Resource Development component of the Improving Basic Skills in Reading and Mathematics program, project teachers of mathematics, pre K-12, will improve their competencies in classroom management and planning for instruction.

Evaluation

The evaluation follows the Planning, Monitoring, and Implementing (PMI) Evaluation Model for Decision-Making which was developed by the Division of Quality Assurance, District of Columbia Public Schools.

Findings

- The Basic Skills component focusing on giving needy students extra help in reading and mathematics involved over 2,000 students in the seventh, eighth and ninth grades from 31 selected schools.

- After eight months of special instruction, 79% of 311 junior high students improved on a majority of the items which they had failed on the Prescriptive Reading Inventory taken in the Fall of 1986.

- After eight months of special instruction, 98.57% of 259 junior high students improved on a majority of the mathematics items which they had failed on the Enright Diagnostic Inventory taken in the Fall of 1986.

- The comparison of the percentile ranking of pre- and post-tests of the students' average CTBS total reading scores resulted in:

  a. From 6th to 7th grade, a decrease from 44 to 37,
  b. From 7th to 8th grade, an increase from 34 to 39, and
  c. From 8th to 9th grade, an increase from 29 to 31.

- The comparison of the percentile ranking of pre- and post-tests of the students' average CTBS total mathematics scores showed:

  a. From 6th to 7th grade, a decrease from 56 to 47,
  b. From 7th to 8th grade, a decrease from 44 to 36, and
  c. From 8th to 9th grade, an increase from 33 to 34.

- Teachers rated the five criteria of the three workshops (objectives, content, materials, organization/format and possibility for use of experiences) positively.

- In rating the effects of the Basic Skills program, 87% of the teachers (N = 31) rated the impact of the program on students' achievement as positive; 90% perceived a positive impact on students' attitudes and 87% reported a positive impact on teachers' attitudes. In addition, 87% of the responding teachers checked that they adapted materials and strategies to the special needs of students.

- The configuration checklists showed that 75% of the teachers were implementing all program components as acceptable or ideal. The Level-of-Use (LoU's) interviews revealed that all of these teachers were at a minimum implementing their programs at the Routine Level (IVa).

- Monitoring records showed that in both semesters teachers from all schools except one were in compliance with the project guidelines.

- Of the group of teachers seeking mathematics certification, 32 teachers needed three or more courses to receive that certification. Of these 32 teachers, two teachers completed their coursework requirements by taking one course per semester at DCPS and a third course (with special permission) at UDC. In the Fall of 1985, nine teachers needed one course for certification, and all nine completed that requirement.

- The level of satisfaction of teachers, regarding their course instructors, was higher in the more advanced courses given in the Spring than in the lower-level courses given during the Fall semester.

- Of the group of mathematics teachers (pre K-12) who participated in the staff development activities, 86% were satisfied with their improvement of competencies in classroom management and 84% were satisfied with their improvement of competencies in instructional planning.

- Over all staff development courses, 82% of the participating mathematics teachers attained the competency level designated by their instructors as successful (i.e., completion of the staff development courses).

BACKGROUND AND PROJECT DESCRIPTION

Introduction

Purpose - The purpose of the Basic Skills portion of this project was to improve the reading and mathematics skills of students in the Junior High School Transition program, grades seven, eight and nine, in 27 junior high schools and 4 middle or extended elementary schools.

The goal of the Mathematics Teacher Resource Development portion of this project was to increase the capability of teachers to provide effective mathematics instruction to students, prekindergarten through 12th grade.

Needs - Although test scores have been improving in the District of Columbia Public Schools (DCPS), analysis of District test results for the 1981-82 school year showed that there were a larger percentage of students scoring below the 25th percentile in the basic skill areas of reading and mathematics than would be expected. With the Superintendent's long-range instructional objectives to "modify and strengthen the implementation of the Competency-Based Curriculum and the Student Progress Plan" and to "increase student performance in reading, language arts, (and) mathematics...." there was a need to provide additional resources for junior high school students scoring two or more years below grade level in reading or mathematics. Thus, the Basic Skills portion of the project was developed.

The need for the Mathematics Teacher Resource Development portion was based on standardized test data and course grades showing low academic achievement of DCPS students in mathematics. Nationally as well, students demonstrated lower interest and achievement in mathematics. Related to this information was the fact that the number of qualified teachers was steadily diminishing. According to Education Week, March 31, 1982, there had been a 77% decline in the number of secondary level mathematics teachers prepared in 600 teacher-training programs in the United States. Among newly employed mathematics and science teachers, over half of them were judged by their principals to be unqualified to teach in those fields but had been hired on an emergency basis because qualified teachers could not be found. The DCPS reflected this national trend. Out of necessity mathematics classes were assigned to teachers whose training had prepared them for other subjects. Many of them had few if any mathematics courses in college.

History - The original Basic Skills program was funded under ESEA Title II, Part B, beginning in March 1980. In the DCPS, the Basic Skills program had two components, one for the local education agency (LEA) and one for the state education agency (SEA). The purpose of the LEA program was to develop a curriculum in life skills for high school students. The areas emphasized were reading a newspaper, writing such as that used for letters and job applications, speaking clearly, interpreting graphic forms of communication, computational skills, money management and information utilization through logic.

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The SEA portion was more concerned with coordinating, planning and disseminating in the Basic Skills area. That grant continued until June 30, 1982.

In 1982, the federal funding for individual programs such as Basic Skills was combined into block grants for states, under ECIA Chapter 2, Sub-Chapter A, Basic Skills Development. The legislative intent of Sub-Chapter A was that funds be used "to develop and implement a comprehensive and coordinated program designed to improve elementary and secondary school instruction in the basic skills of reading, mathematics, and written and oral communication." The Improving Basic Skills in Reading and Mathematics program comprised a series of activities to meet this legislative mandate.

During the 1982-83 school year, the project covered two areas. Each project was evaluated separately. The first project was entitled Basic Skills in Reading and Mathematics, the purpose being the same as this year's, but with an emphasis on providing the services to the students in specially located centers. With the planned extension of the Student Progress Plan (SPP) to the seventh grade, the emphasis was changed to providing services to junior high students in transition classes.

The other project was entitled Mathematics Teacher Resource Development, which was designed to upgrade the quality of mathematics teaching in the DCPS. That aspect of the program continued during the 1985-86 school year. These two facets comprise the present Improving Basic Skills in Reading and Mathematics program.

Description of the Project

Target Population

The population served by the Basic Skills component consisted of over 2,000 students in DCPS junior high and middle schools, seventh, eighth and ninth graders who were assigned to transition teachers for help in reading or mathematics or both. The target population for the Mathematics Teachers Resource Development consisted of (1) teachers in the DCPS who sought further training for certification as mathematics teachers, (2) mathematics teachers in the DCPS who sought to upgrade their skills in order to provide quality instruction to students and (3) potential mathematics teachers who might be recruited to teach in the DCPS.

Staffing

Personnel funded by the project were the Assistant Director of Reading, the Assistant Director of Mathematics, the Assistant Director for Resource Development, a clerk and the consultants for inservices. Other staff members contributing to the efforts were the Director of the Instructional Services Center, the Supervising Directors of Reading and of Mathematics, the course instructors and the administrators and teachers in the 31 participating schools.

Program Components

The Basic Skills component was planned to supplement the regular program of project participants in the 27 junior high schools, one middle school and three extended elementary schools. Using criterion-referenced tests, transition teachers were to determine and record the areas in which students needed extra help. An individualized program was to be established for each student as a supplemental learning experience with the appropriate records kept as part of the management system. Extra instructional materials would be supplied. Project staff were to monitor and provide technical assistance. Inservice sessions were to be held with consultants participating as needed. Both criterion-referenced and norm-referenced standardized tests to assess student improvement were to be given at the end of the year.

The Mathematics Teachers Resource Development was set up to implement teacher training and upgrading in mathematics by providing inservice and college level courses. Cooperation with local universities for courses was to be sought as well as talent from the DCPS Mathematics Department. Teachers taking courses would be evaluated on their knowledge of course content. Inservice and university courses would be offered after school hours, on-site in the DCPS. Workshops addressing specific skill needs or topics would be offered regionally, in designated schools, and at the Instructional Services Center. Individual counseling for teachers would be provided to assist in decision-making about appropriate activity selection and resource needs. Training activities would be designed to assist teachers in developing the competencies they needed to help students acquire required skills in mathematics.

EXTERNAL EVALUATION DESIGN - PLANNING, MONITORING AND IMPLEMENTING (PMI) EVALUATION MODEL FOR DECISION-MAKING

The evaluation follows the Planning, Monitoring, and Implementing (PMI) Evaluation Model for Decision-Making which was developed by the Division of Quality Assurance, District of Columbia Public Schools. (See Appendix A.) The evaluation design, developed at the beginning of the project year, consisted of the intended inputs, processes and outcomes on specially designed status report forms. The interim report distributed at the mid-point of the project cycle related, on the status report forms, agreements or discrepancies between intended and observed inputs and processes. This final report includes the interim report data brought up to date, plus the agreements and discrepancies between intended and observed outcomes for each objective. Supporting data are included in the appendices. Preceding the PMI status report forms is the results section which summarizes the agreements and discrepancies for each objective and states a general conclusion.

EVALUATION RESULTS

Narrative Summary

The results of the evaluation are summarized in this section. Following the narrative are the inputs, processes and outcomes on which this summary is based, presented in the PMI reporting format. Supporting data and other information are in the appendices.

Objective A: At least two-thirds of the junior high students who are in the classes of junior high secondary student progress plan support teachers (SSPPST) and who receive reading or mathematics instruction or both for two semesters during the 1985-86 year in the Improving Basic Skills in Reading and Mathematics program will acquire proficiencies in the majority of the skills in which they were found to be deficient, as measured by a criterion-referenced test. Also those students will improve their reading and mathematics skills relative to their achievement one year previous, as measured by a norm-referenced test.

All program inputs, with the exception of adequate classroom space, showed agreement between the intended inputs and the observed inputs. That one discrepancy occurred because in one school space limitation required sharing a classroom withn one teacher using it half the day while the other teacher "floated" and vice versa.

All processes showed agreement between intended and observed items. Project teachers planned and administered personalized instructional programs in reading and mathematics, carried out continuous assessment of their students and charted the progress of their students toward completion of reading or mathematics objectives. To measure the overall program effects, both pre and post criterion-referenced and norm-referenced tests were given.

The outcomes showed partial agreement between the intended and observed items. Students were to reach pre-established criteria on either the criterion- or norm-referenced standardized tests. For all three grade levels singly, the percent of 311 project students, improving on a majority of items failed on the Prescriptive Reading Inventory (PRI) criterion-referenced pre-test, was higher than 67%. The percent of 259 project students, improving on a majority of items failed on the Enright Diagnostic Inventory (EDI) pre-test, was higher than 67%. Aggregated results of the PRI post-test for the 7th, 8th, and 9th graders were that 79% of the sample improved on a majority of the reading items that they had failed on the pre-test. Ninety-eight percent (98%) of the sample of junior high students taking the EDI post-test improved on a majority of the mathematics items which they, as a group, had failed on the pre-test.

The percentile rankings of the transition students' average CTBS total reading and total mathematics scores were compared from 1985 to 1986 for the three junior high grade levels. On the CTBS, 7th graders decreased in their percentile ranking in reading from 44th to 37th from the end of 6th grade (1985) to the end of 7th grade (1986); while their percentile ranking in mathematics decreased from 56th to 47th.

Eighth graders in the sample increased in their percentile ranking in reading, going from 34th in 1985 to 39rd in 1986; while their percentile ranking in mathematics decreased from 44th to 36th. And finally, 9th graders increased (from 8th grade in 1985 to 9th grade in 1985) both their percentile rankings in reading and in mathematics--with reading increasing from 29th to 31th and mathematics increasing from 33th to 34th.

As a caveat, all data discussed above were based on rather small samples of junior high students in the transition classes. Caution should be taken in the interpretation of the test results.

Objective B: By June 1986, after receiving the Improving Basic Skills in Reading and Mathematics program's staff development, instructional materials and instructional support from Assistant Directors of Reading and Mathematics, at least 80% of the project teachers will demonstrate their ability to work with skill-deficient students, as measured by monitoring guides and teacher evaluation questionnaires.

Additional inputs of Objective B all showed agreement; between the intended and observed items. These included inservice needs, such as consultants, adequate space and released time for the participating teachers to attend the inservices. Materials observed to be in agreement with intended outcomes included monitoring guides and evaluation forms.

All processes were also in full agreement from the intended to the observed. Orientation and inservice sessions were held; teachers were given materials, information and strategies; and technical assistance was provided through workshops and on-site visits by the coordinators. Checklists and project teacher questionnaires and interviews were assembled to collect evaluation data.

All observed outcomes were in agreement with the intended outcomes. Teachers' ratings for the four workshops were in either the "very good" or "excellent" categories. Thirty-one schools had all pluses on the observation checklist for the first semester regarding their focus on classroom environment, instruction and classroom management. And, they all maintained those marks on to the second semester observation. The teacher questionnaires (N = 31) showed that over 87% of the teachers adapted materials and strategies to special needs of the transition students and 87% felt there was a positive impact of the program on student achievement, 90% on student attitudes and 87% perceived a positive impact on teachers' attitudes.

Objective C: As a result of participation in the Mathematics Teacher Resource Development component of the Improving Basic Skills program, project teachers seeking mathematics certification will complete their needed courses or an average of three courses toward their certification.

Two of the additional inputs for Objective C showed a discrepancy between the intended and observed. There was no position for a resource teacher

trainer in the budget and there was no response by the instructors to fill out an evaluation of their work.

There were two partial agreements between the intended processes and the observed processes. Not enough teachers taking Advanced Calculus I or Calculus I returned their faculty evaluations to reflect a representative sample. The percentages of teachers who returned the faculty evaluation form for the remaining five courses ranged from 63% to 80%. In addition, only 67% of the teachers who completed all their coursework required for certification filled out a feedback evaluation form for use in revision of future courses.

As outcomes, 32 teachers needed their three or more courses across two semesters to receive their certification. Of this group, two teachers (6%) completed their coursework requirements. However, as the system now is, unless teachers took the Summer Institute, they were permitted to enroll in only one course per semester. The two teachers described above who did complete their coursework took a third course at UDC. In the Fall of 1985, all nine teachers needing one course to receive certification took that one course, fulfilling that one requirement. Of the certification courses given in the Fall of 1985, the teachers' average overall evaluation of their instructors was rather low--midway between "satisfactory" and "marginal" for the Introduction of Computer Science I instructor and slightly above "satisfactory" for the Pre-Calculus/ Trigonometry I instructor. Of the three certification courses given in the Spring of 1986, the teachers' average overall evaluation of their instructors was less variable and either "good" or between "good" and "excellent." And, finally, teachers completing all their coursework for certification rated seven evaluation criteria. On the average, these teachers rated these criteria as above average.

Objective D: As a result of participation in staff development events through the Mathematics Teacher Resource Development component of the Improving Basic Skills in Reading and Mathematics program, project teachers of mathematics, pre K-12, will improve their competencies in classroom management and planning for instruction.

Inputs were the same as those listed for Objective C, except for the population of interest. Objective C was concerned with all secondary school teachers seeking mathematics certification; while Objective D was targeted to pre K-12 mathematics teachers in DCPS. There were agreements in the intended and observed input for this one change in inputs for Objective D.

All observed processes were in full agreement with the intended. The project coordinator conducted a needs assessment of pre K-12 mathematics teachers and designed staff development mathematics inservices for them. She also provided counseling to mathematics teachers requesting help in classroom management and planning for instruction. At the end of the staff development activities, all participating teachers were asked to complete an evaluation form giving their views regarding the manner in which the course information was presented, the clarity of the presentations, the value of the course,

their interest in the course, and the meeting of course objectives. And, finally, the teachers were to give their perceptions of the improvement in classroom management and instructional planning that they could attribute to the staff development inservices.

Two of the three observed outcomes of Objective D were in full agreement with the intended outcomes. One outcome (attainment of defined competency level) was in partial agreement. A needs assessment was done for both elementary and secondary mathematics teachers. One topic--Teaching for Remediation--was very high on the list for both groups of teachers. An analysis of participating teachers' competency levels showed that over all staff development courses (including the Summer Institute), 82% of the teachers attained the competency level designated by their instructors as successful--completion of the course. Over all staff development courses more than 80% of the teachers attained competency. However, for three inservice courses individually 80% of the participants did not reach the competency level. Only 57% of the teachers in the Varying Teaching Styles course and the Creative Problem Solving course completed their coursework. In addition, 91% of the teachers taking a History of Mathematics reached the competency level. Teachers also filled out a feedback survey rating selected elements of the staff development activities. Over three-fourths of the responding teachers were satisfied with their improvements in classroom management and planning for instruction, 86% and 84%, respectively. The average rating of satisfaction for these two improvement areas was 4.2 and 4.3, respectively, out of a possible high rating of 5.0. These mean values translate to positive ratings of teachers' satisfaction regarding their improvement in classroom management and planning for instruction.

Conclusion

The goals of this project were to develop and implement a program to improve instruction and learning in reading and mathematics and to provide resource development for mathematics teachers.

Objective A was partially reached with supportive data showing gains in percentile rankings of CTBS average reading and mathematics scores from 7th to 8th grade reading scores and 8th to 9th grade reading and mathematics scores. The data from the two criterion-referenced pre- and post-tests (PRI and DMI) were somewhat discrepant from the CTBS data discussed above. For the PRI, 79% of the sample of students improved on a majority of items failed on the pre-test. For the DMI, 98% of the sample improved on a majority of mathematics items, failed on the pre-test.

Objective B verified that, given training, teachers can work well with skill-deficient, junior high students in implementing the programs to fit the special need of the students.

Meeting Objective C was problematic in that, with the exception of two cases, teachers were only allowed to register for one certification course per semester. However, in relation to the certification courses that were taken, the project teachers' level of satisfaction with the courses was positive, but somewhat skeptical, regarding the usefulness of several courses for classroom applications.

Objective D was partially achieved with 86% of the project teachers in grades pre K-12, participating in the staff development events, perceiving that they improved their competencies in classroom management and 84% perceiving that they had improved their planning of instruction. Over all staff development courses, 82% of the teachers attained the predefined competency level of completing their coursework.

Results of the evaluation support the continuation of this project with the strong recommendation that more effort be addressed to including more junior high students in the evaluation of the Basic Skills portion of this project. As it now stands, the results discussed in this paper should be interpreted with caution.

Decision

This report will be forwarded to the Project Coordinators, the Project Manager, the LEA Chapter 2 Director, the Superintendent and the Board of Education to aid them in their decision-making regarding this project.

FINAL EVALUATION REPORT

PLANNING, MONITORING, AND IMPLEMENTATION (PMI)
EVALUATION MODEL FOR DECISION-MAKING

Reporting Form

Goal: To develop and implement a program to improve instruction in the basic skills of reading and mathematics which supports, strengthens and augments the regular school program; and to provide resource development for mathematics teachers who do not hold certification in their field.

Objective A: At least two-thirds of the junior high students who are in the classes of junior high secondary student progress plan support teachers (SSPPST) and who receive reading or mathematics instruction or both for two semesters during the 1985-86 year in the Improving Basic Skills in Reading and Mathematics program will acquire proficiencies in the majority of the skills in which they were found to be deficient, as measured by a criterion-referenced test. Also those students will improve their reading and mathematics skills relative to their achievement one year previous, as measured by a norm-referenced test.

PART I

INPUTS

INTENDED	STATUS	OBSERVED
a. Project manager	Agreement	a. The project manager is the Director of the Instructional Services Center.
b. Assistant Director of Reading	Agreement	b. The project co-coordinator is the Assistant Director of Reading
c. Assistant Director of Mathematics	Agreement	c. The project co-coordinator is the Assistant Director of Mathematics
d. Supervising Director of Reading	Agreement	d. The Supervising Director of Reading for DCPS is on the project staff.
e. Supervising Director of Mathematics	Agreement	e. The Supervising Director of Mathematics for DCPS is on the project staff.
f. Clerk-typist	Agreement	f. This position was filled as verified by a board order.

OBJECTIVE A

PART I (continued)

INPUTS

INTENDED	STATUS	OBSERVED
g. Project teachers	Agreement	g. A complete roster of project teachers was submitted to the ECIA Chapter 2 evaluation office comprising total of 46 teachers classified as SSPPS teachers, with some teaching both reading and mathematics (N=11) and others teaching just reading (N=21) or mathematics (N=14).
h. Principals of project schools	Agreement	h. A complete roster of principals of project schools (N=31) was submitted to the Chapter 2 evaluation office.
i. Regional support personnel assigned to SSPPS teachers	Agreement	i. The project co-coordinators verified that regional supervisors (one per region) were assigned to SSPPS teachers within their respective region.
j. Seventh, eighth and ninth grade students in classes of SSPPS teachers	Agreement	j. The project co-coordinators verified that class lists are available in all schools. Rosters of students from ten (10) of the 31 participating schools have been submitted to the Chapter 2 evaluation office.
k. Maximum class size of 15 students	Discrepancy	k. Two teachers indicated in writing their class lists exceeded 15 students.

OBJECTIVE A

PART I (continued)

INPUTS

INTENDED	STATUS	OBSERVED
l. Adequate classroom space	Discrepancy	l. According to the project co-coordinators, classroom space is adequate in all but one school, where limitations require sharing a classroom - one teacher uses it half the day while the other teacher floats and vice versa.
m. Adequate instructional materials and equipment	Agreement	m. Instructional materials and equipment were verified by the project's co-coordinators as being adequate.
n. Pre and posttest forms	Agreement	n. Pre and posttests forms for the two criterion-referenced tests, "Prescriptive Reading Inventory" (PRI) and "Enright's Diagnostic Inventory", Form A (EDI) for mathematics, were to be used. This is the first year using the EDI. The norm-referenced Comprehensive Tests of the Basic Skills (CTBS), given as pretests last year, were for the sixth grade Level 2, Form T and for the seventh and eighth grades Level 3, Form T. The CTBS, given this current school year as post-tests, were for grades seven and eight Level 3, Form S and for grade nine Level 4, Form S.

OBJECTIVE A

PART II

PROCESSES †

INTENDED	STATUS	OBSERVED
1.1 The project co-coordinators will inventory materials and order replacement materials depending on available funds.	Agreement	1.1 The project co-coordinators verified that an inventory of materials was conducted showing a need for items such as test booklets and answer sheets. Crucial materials were replaced.
1.2 The project co-coordinators, as liaison personnel, will make contact with building principals, regional support personnel and participating teachers about portions of the program with which each is involved.	Agreement	1.2 Contacts with building principals were made only if requested. Workshops were designed by the project co-coordinators to assist participating teachers with their programs.
1.3 Project teachers will administer criterion-referenced pretests in reading or mathematics, using the results to diagnose students' needs in those areas.	Agreement	1.3 Criterion-referenced pretests were administered in October 1985 to diagnose students' needs. New students were tested in February 1986.
1.4 Project teachers will instruct their students in reading or mathematics, following the personalized instructional plans, and chart continuous progress.	Agreement	1.4 The project co-coordinators verified that teachers are personalizing instruction either by using the BASIC Kit (an instructional support piece) or by using their own plans. The BASIC Kit has a chart for recording the continuing progress of students and the co-coordinators verified that student progress is being charted.

† Processes numbered to correspond with outcomes

OBJECTIVE A

PART II (continued)

PROCESSES †

INTENDED	STATUS	OBSERVED
1.5 Project teachers will keep inventory reports up to date and will submit the completed forms at the end of the year.	Agreement	1.5 Project teachers submitted their updated inventory reports to project coordinators at the end of school year.
Project teachers will administer posttests in reading or mathematics to their students.	Agreement	1.6 Posttests (both the criterion-referenced and norm-referenced) were administered at the end of the school year (May 1986).
1.7 Project personnel will provide the ECIA Evaluation Team with names and identification numbers of project students.	Partial Agreement	1.7 Some project teachers supplied names and I.D. numbers of their students for purposes of matching pre and posttest scores and retrieval of CTBS Total Reading and Total Mathematics scores from the mainframe computer.
1.8 Project co-coordinators will record which students had only one semester of the Basis Skills program.	Agreement	1.8 Project teachers identified students having only one semester of the Basic Skills program.

† Processes numbered to correspond with outcomes

OBJECTIVE A

PART III

OUTCOMES

INTENDED	STATUS	OBSERVED
1. By June 1986, analysis of raw scores submitted to the ECIA Chapter 2 Evaluation Office by the project co-coordinators will show that at least two-thirds of the students receiving two semesters of instruction through the Basic Skills project		
(a.) will acquire proficiencies in the majority of the reading skills in which they were found to be deficient on a criterion-referenced test.	Agreement	(a.) Results for the Prescriptive Reading Inventory (PRI) for a total of 331 junior high school students were that 79% improved on objectives measured at the beginning of the school year.
(b.) will acquire proficiencies in the majority of the mathematics skills in which they were found to be deficient on a criterion referenced test.	Agreement	(b.) Results from the Enright Diagnostic Inventory (EDI) for a total of 269 junior high students were that 98% improved on objectives measured at the beginning of the school year.
Students in the project with comparable pre and posttest scores		
(c.) will show a higher percentile ranking than the previous year in reading on a norm-referenced tests,	Partial Agreement	(c.) The percentile rankings of the students' average CTBS total reading scores were compared from 1985 to 1986 for grades 7, 8 and 9 separately. These results follow. Results for 273 7th graders who had taken the

OBJECTIVE A

PART III (continued)

OUTCOMES

INTENDED	STATUS	OBSERVED
(c.) (continued)		(c.) 6th grade CTBS in 1984 showed a decrease in their reading percentile rank from a 44 percentile ranking in 1985 to 37 percentile ranking in 1986. The 151 8th grade students who had taken the CTBS in the 7th grade in 1985 demonstrated an increase in their reading percentile ranking going from 34 in 1985 to 39 in 1986. And finally, 51 9th graders who had taken the CTBS while in 8th grade in 1985 showed an increase in their reading percentile rank from a 29 percentile ranking in 1985 to a 31 percentile ranking in 1986. (See Appendix B.)
(d.) Will show a higher percentile ranking then the previous year in mathematics on a norm-referenced test.	Partial Agreement	(d.) The percentile rankings of the students' average CTBS total mathematics scores were compared from 1985 to 1986 for grades 7, 8 and 9 singly. In mathematics, 271 7th graders who had been tested on the CTBS as 6th graders demonstrated a decrease in their percentile ranking from 1985-1986 with ranking decreasing from 56 to 47. The 150 8th grade students who had taken the CTBS in the 7th grade in 1985 showed a decrease in their mathematics percentile ranking from 44 in 1985 to 36 in 1986. And, the 51 9th graders who had taken the

OBJECTIVE A

PART III (continued)

OUTCOMES

INTENDED	STATUS	OBSERVED
(d.) (continued)		(d.) CTBS as 8th graders in 1985 showed an increase in their mathematics percentile rank from a 33 ranking in 1985 to a 34 percentile ranking in 1986. (See Appendix B.)

FINAL EVALUATION REPORT

PLANNING, MONITORING, AND IMPLEMENTATION (PMI)
EVALUATION MODEL FOR DECISION-MAKING

Reporting Form

Goal: To develop and implement a program to improve instruction in the basic skills of reading and mathematics which supports, strengthens and augments the regular school program; and to provide resource development for mathematics teachers who do not hold certification in their field.

Objective B: By June 1986, after receiving the Improving Basic Skills in Reading and Mathematics program's staff development, instructional materials and instructional support from Assistant Directors of Reading and Mathematics, at least 80% of the project teachers will demonstrate their ability to work with skill-deficient students, as measured by monitoring guides and teacher evaluation questionnaires.

PART I

INPUTS

INTENDED	STATUS	OBSERVED
For Inputs a through l see Objective A.		
m. Consultants for inservices	Agreement	m. The evaluation manager examined agendas and memorandums for four inservice workshops, listing the names of the consultants who facilitated the workshops.
n. Adequate space for inservices	Agreement	n. The project co-coordinators verified that the space at Langdon used for the inservices was adequate.
o. Released time for project teachers to attend inservices	Agreement	o. A memo from the Office of Instruction to the Regional Superintendents, the Assistants for Instruction and principals of Basic Skills schools permitted the hiring of substitute teachers where necessary, allowing Basic Skills teachers release time to attend the inservices.

OBJECTIVE B

PART I (continued)

INPUTS

INTENDED	STATUS	OBSERVED
p. Suggested student record forms for project activities	Agreement	p. The project co-coordinators noted that the record forms used in the previous year would be used again.
q. Monitoring quide for Assistant Directors' on-site visits	Agreement	q. A sample monitoring guide for on-site visit is on file in the ECIA Chapter 2 evaluation office. (See Appendix C.)
r. Teacher evaluation questionnaire	Agreement	r. The teacher evaluation questionnaire is on file in the Chapter 2 evaluation office. (See Appendix D.) The questionnaire was sent to all participating teachers close to the end of the school year.

OBJECTIVE B

PART II

PROCESSES †

INTENDED	STATUS	OBSERVED
1.1 At least four half-day inservice sessions, two for reading and two for mathematics, will be held during the school year for project teachers.	Agreement	1.1 Three half-days of inservice sessions were held for project teachers, two (2) for reading teachers and two (2) for mathematics teachers.
1.2 Project teachers will complete activity evaluation forms for each inservice.	Agreement	1.2 Project teachers completed activity evaluation forms for the four inservice sessions held during 1985/86.
2.1 The project co-coordinators will prepare and distribute instructional bulletins periodically.	Agreement	2.1 The project co-coordinators drafted Basic Skills instructional bulletins (March and June 1986) which were distributed to project teachers.
2.2 The project co-coordinators make on-site support visits to project teachers.	Agreement	2.2 School visit logs and monitoring checklists were examined by evaluation manager.

† Processes numbered to correspond with outcomes

OBJECTIVE B

PART II (continued)

PROCESSES †

INTENDED	STATUS	OBSERVED
2.3 The project co-coordinators will complete monitoring guides using information from student folders, interviews and classroom observation.	Agreement	2.3 The project co-coordinators completed monitoring forms after each of their on-site support visits to project teachers.
2.4 During the spring of 1986, project teachers will complete a teacher evaluation questionnaire.	Agreement	2.4 Teacher evaluation questionnaires were completed and returned by all teachers, a 100% response rate.

† Processes numbered to correspond with outcomes

OBJECTIVE B

PART III

OUTCOMES

INTENDED	STATUS	OBSERVED
1. An analysis of raw scores of teacher ratings of project workshops, submitted to the ECIA Chapter 2 Evaluation Office by the co-coordinators by June 1986, will show mean ratings to be above average on the value of the workshop to participants and on the meeting of workshop objectives.	Agreement	1. Twenty-five (25) teachers from reading and mathematics components of the Basic Skills program rated the Orientation Workshop held on October 8, 1985 on five criteria on a scale of 1 to 5, with 1 indicating the workshop was "not applicable" and 5 indicating the workshop was "excellent". All five mean ratings were above average with the average being 3.0. Listed below are the five means for the five rating criteria.

Criteria	Average Rating
Objectives	4.79
Content	4.88
Materials	4.72
Organization/ Format	4.75
Utility	4.88
Combined Criteria	4.80

Nineteen (19) teachers in the mathematics component attended a workshop on Nov. 14, 1985. They evaluated the workshop using the five criteria noted above, with the average ratings for each being:

Criteria	Average Rating
Objectives	4.37
Content	4.42
Materials	4.42
Organization/ Format	4.47
Utility	4.42
Combined Criteria	4.42

OBJECTIVE B

PART III

OUTCOMES

INTENDED	STATUS	OBSERVED
		1 (Continued) Twenty-four (24) teachers involved with the reading component of Basic Skills Improvement attended a workshop on March 13, 1986. They evaluated the workshop using the five criteria previously noted, with the average rating for each being: Criteria — Average Rating Objectives 4.96 Content 4.96 Materials 4.74 Organization/ Format 4.96 Utility 4.96 Combined Criteria 4.91 (See Appendix E)
2. An analysis of information submitted to the ECIA Chapter 2 Evaluation Office by the project co-coordinators by June 1986 will show that at least 80% of the project teachers have adapted strategies and materials to the special needs of students, to be measured as follows:		
(a.) a demonstration of compliance (marking all "Yeses") on the Basic Skill Monitoring Guide and	Agreement	(a.) Thirty of thirty-one schools had all pluses on the obligation checklists for the first and second semesters for classroom environment, instruction and classroom management.

OBJECTIVE B

PART III

OUTCOMES

INTENDED	STATUS	OBSERVED
(b.) a mean rating of 4 out of a possible 5 on teacher evaluation questionnaire.	Agreement	(b.) Eighty-seven percent (87%) of the 31 responding teachers rated the impact of the Basic Skills program on students' achievement as positive. Out of a possible score of five, indicating a positive effect of the program, the mean rating was 4.42. Ninety percent (90%) of the teachers rated the program's effect on students' attitudes as positive, with a mean rating of 4.39 and 87.1% of the teachers rated the program's effect on teacher attitudes as positive, with a mean rating of 4.52. (See Appendix F.) The second portion of the questionnaire was directed toward application of the Basic Skills program. On the Likert-type questionnaire item asking the extent to which teachers adapted materials to the special needs of students, 87.1% checked either a "4" or a "5" with "5" indicating that teachers had "totally" adapted the materials and "1" indicating there was no special adaptation. The mean rating of the 31 responding teachers was 4.42. On the item asking for the extent to which teachers adapted strategies to the special needs of students, 90.4% of the teachers checked a "4" or a "5", with the mean rating being 4.45. (See Appendix F.)

FINAL EVALUATION REPORT

PLANNING, MONITORING, AND IMPLEMENTATION (PMI)
EVALUATION MODEL FOR DECISION-MAKING

Reporting Form

Goal: To develop and implement a program to improve instruction in the basic skills of reading and mathematics which supports, strengthens and augments the regular school program; and to provide resource development for mathematics teachers who do not hold certification in their field.

Objective C: As a result of participation in the Mathematics Teacher Resource Development component of the Improving Basic Skills program, project teachers seeking mathematics certification will complete their needed courses or an average of three courses toward their certification.

PART I

INPUTS

INTENDED	STATUS	OBSERVED
For Inputs a, e, and f see Objective A.		
b. Assistant Director for Resource Development	Agreement	b. The Assistant Director for Resource Development is the coordinator for the Mathematics Teacher Resource Development component of the Improving Basic Skills in Reading and Mathematics program.
c. Resource teacher trainer	Discrepancy	c. The position was not in the project's budget.
d. UDC staff members and other course Instructors	Agreement	d. A class list of UDC personnel was examined by the evaluation manager.
g. Secondary school teachers of mathematics in the DCPS who are not certified as probationary or permanent mathematics teachers	Agreement	g. The project coordinator examined a printout of teachers to see which mathematics teachers had permanent or temporary certification. The evaluation manager also reviewed the printout.

OBJECTIVE C

PART I (continued)

INPUTS

INTENDED	STATUS	OBSERVED
h. Adequate space for classes	Agreement	h. The project coordinator reported adequate classroom space. The classes were held at the Mathematics Science Resource Center at Backus Junior High School.
i. Adequate materials and supplies	Agreement	i. The project coordinator reported that materials and supplies were adequate.
j. Needs assessment forms for mathematics teachers	Agreement	j. In August 1985, a needs assessment was done for mathematics teachers applying for certification in mathematics. A copy is on file in the project coordinator's office.
k. Mathematics inservices, university courses and workshops	Agreement	k. Teacher and class rosters of four fall and three spring university courses were examined by the evaluation manager. The university courses were: Pre-Calculus/Trigonometry I and II, Introduction to Computer Science I and II, Calculus I and II and Advanced Calculus I. Also a grade list was examined for the Summer Institute in Probability and Statistics (July 8-25, 1985).
l. Instrument to assess faculty performance	Agreement	l. The evaluation form was developed by the project coordinator. A copy is on file in the ECIA Chapter 2 evaluation office.

OBJECTIVE C

PART I (continued)

INPUTS

INTENDED	STATUS	OBSERVED
m. Feedback instrument for teachers who have completed all courses for certification to be developed by project coordinator	Agreement	m. The feedback survey for teachers was developed by the project coordinator. A copy is on file in the ECIA Chapter 2 evaluation office.
n. Informational material on the Resource Development Program for dissemination purposes	Agreement	n. Informational materials included articles in the District Education and Math Angles. Examples were examined by the evaluation manager. The articles are on file in project coordinator's office.
o. Feedback instrument for inservice course instructors.	Discrepancy	o. The intention of this feedback instrument was for instructors to evaluate their courses. However, there was no response by the instructors.
p. Recording system to indicate teachers enrolled in training and their attendance at courses.	Agreement	p. The Division of Continuing Education "Course Class List" was used to record this information.
q. Recording system to indicate mathematics counseling provided.	Agreement	q. A liaison from UDC's Division of Continuing Education counseled the teachers regarding their coursework.

OBJECTIVE C

PART II

PROCESSES †

INTENDED	STATUS	OBSERVED
1.1 The project coordinator will conduct a needs survey for planning project courses for the academic year.	Agreement	1.1 In April 1985, the project coordinator had an initial meeting with the applicants (teachers seeking certification in mathematics) and took a survey of their backgrounds. In August 1985, the project coordinator took an entry level assessment of these applicants. These assessments are on file in the project coordinator's office, as well as is a review of the participants' transcripts. (See Appendix G.)
1.2 The project coordinator will identify resources in the community to meet the assessed needs.	Agreement	1.2 For this school year the project coordinator provided applicants with tutors and a liaison person.
1.3 The project coordinator will develop a cost effective plan for delivery of courses on-site.	Agreement	1.3 The project coordinator has initiated an inter-agency agreement between DCPS and UDC to utilize funding from the Mathematics-Science Bill.
1.4 The project coordinator will send out announcements of courses as a way of recruiting teachers to the program.	Agreement	1.4 Memos and brochures describing program courses were shown to the evaluation manager.
1.5 The project coordinator will interview teachers requesting counseling and will keep records of contacts.	Agreement	1.5 In addition to interviewing teachers seeking certification, the project coordinator conferred with the liaison (advisor) regarding those interviews.

† Processes numbered to correspond with outcomes

OBJECTIVE C

PART II (continued)

PROCESSES †

INTENDED	STATUS	OBSERVED
1.6 The project staff will monitor registration, instruction and support needs.	Agreement	1.6 The project coordinator arranged to have the liaison from UDC primarily responsible for registration and the processing of grades. The project coordinator monitored the registration and made on-site checks.
2.1 The project staff will assist in course instruction, as needed.	Agreement	2.1 The project staff assisted UDC in finding appropriate instructors.
2.2 Teachers will attend courses offered through this program with records kept of attendance.	Agreement	2.2 The project coordinator verified that for the most part UDC instructors kept records of attendance.
2.3 The project coordinator will record the number of courses required and the number of courses completed by project participants.	Agreement	2.3 This process was completed by the close of the school year by the project coordinator. These records were shown to the evaluation manager.
3.1 All project participants (teachers) will complete a faculty evaluation.	Partial Agreement	3.1 For the first semester there was an extremely limited response of the teachers in Advanced Calculus I and Calculus I regarding the completion of the faculty evaluation. Eight of the ten teachers (80%) taking Introduction to Computer

† Processes numbered to correspond with outcomes

OBJECTIVE C

PART II (continued)

PROCESSES †

INTENDED	STATUS	OBSERVED
3.1 (continued)		3.1 (continued) Science I and ten of the 16 teachers taking Pre-Calculus/ Trigonometry I (63%) completed the faculty evaluations. For the second semester, five of seven teachers (71%) taking Calculus II, 12 of the 15 teachers (80%) taking Pre-Calculus/Trigonometry II and seven of the nine teachers (78%) taking Introduction to Computer Science II completed the faculty evaluation form. Copies of these evaluation forms are in Appendix H.
3.2 Teachers who have completed all the courses required for certification will complete a feedback questionnaire for use in revision of future courses.	Partial Agreement	3.2 Only teachers taking the Advanced Calculus I course in the fall were asked to fill out this course evaluation form. Six of the nine teachers (67%) did so. A copy of this evaluation is in Appendix I.

† Processes numbered to correspond with outcomes

OBJECTIVE C

PART III

OUTCOMES

INTENDED	STATUS	OBSERVED
1. An examination of records submitted by June 1986 to the ECIA Chapter 2 evaluation office by the project coordinator, will show that a plan of action reflecting mathematics teacher certification needs and available resources is on file at the Instructional Services Center.	Agreement	1. The Program Work Plan and a folder from the Board of Examiners containing a listing of teachers and the certified courses needed by each of them are on file at the Instructional Services Center.
2. A list submitted to the ECIA Chapter 2 evaluation office by the project coordinator of project participants, with the number of courses required of their secondary mathematics certification and the number of such courses completed, will show that at least 80% of the participants have completed their needed courses or an average of three of the courses needed for certification.	Discrepancy	2. In DCPS, a teacher could only take two certification courses per year, not counting taking the Summer Institute the previous summer (Summer 1985). Less than 50% of the teachers seeking certification in SY 1985-86 took the Summer Institute. In the Fall '85, nine teachers needed one course for certification in mathematics. All nine completed that one course (Advanced Calculus I). Thirty-two teachers needed three or more courses across the two semesters to receive their certification. Of this group, two teachers (6%) completed all the necessary requirements pertaining to their coursework. These two teachers finished as they received special permission to take their third course at UDC.

OBJECTIVE C

PART III (continued)

OUTCOMES

INTENDED	STATUS	OBSERVED
3. Analyses of outcome data submitted by June 1986 to the ECIA Chapter 2 evaluation office by the project coordinator, will show that participants rated the faculty and courses above average on a five point Likert scale.	Partial Agreement	3. Four certification courses were given in the Fall 1985. With their enrollment, they were: o Introduction to Computer Science I (N=10) o Pre-Calculus/Trigonometry I (N=16) o Calculus I (N=6) o Advanced Calculus I (N=9). Because of the extremely low response rate (indicating a possible bias) of teachers in Calculus I and Advanced Calculus I, their faculty evaluations were not analyzed. Eight of the ten teachers taking Introduction to Computer Science I rated their instructor below average, on a scale of 1 ("unsatisfactory") to 5 ("excellent") with 3 being the average ("satisfactory"), on four of eleven criteria. They were: o Overall planning and knowledge of the course (1.9) o Ability to explain complex subject matter (2.0) o Adequate instructions given prior to the start of a new procedure (2.0) o Answering questions promptly and completely (2.3).

OBJECTIVE C

PART III (continued)

OUTCOMES

INTENDED	STATUS	OBSERVED
		3. (continued) Their average overall rating of the instructor was midway between "satisfactory" and "marginal" (2.5). Ten of the 16 teachers taking Pre-Calculus/Trigonometry I also rated their instructor below average on four of eleven evaluation criteria. These criteria were: o Fairness in structure and grading of tests (2.9) o Return of papers within a reasonable amount of time (1.6) o Punctual in meeting class (2.8) o Clear and distinct speech (2.9). The teachers' average overall evaluation of their instructor for this course was slightly above "satisfactory" (3.2). Three certification courses were given in the Spring 1986. Along with their enrollments, they were: o Introduction to Computer Science II (N=9) o Pre-Calculus/Trigonometry II (N=15) o Calculus II (N=7)

OBJECTIVE C

PART III (continued)

OUTCOMES

INTENDED	STATUS	OBSERVED
		3. (continued) For these three courses, the teachers gave their instructor, on a 1 to 5 point scale, an above "satisfactory" rating in all separate evaluation criteria. Across all evaluation criteria, the teachers' average rating for instructors for Introduction to Computer Science II was 4.8 (between "excellent" and "good"), the average rating for Pre-Calculus/ Trigonometry II was 4.0 ("good") and the average rating for Calculus II was 4.3 (between "excellent" and "good"). (See Appendix G.) Teachers completing all their certification courses (N=9)-- the nine taking the Advanced Calculus I course-- filled out an evaluation form to be used for the designing of future courses to service the needs of teachers. On a scale of 1 (low) to 5 (high) the teachers, on the average, rated each of seven evaluation criteria on a range of 3.2 ("usefulness of the courses to you for classroom application") to 4.0 ("your motivation to complete the coursework"). (For a review of other criteria, see Appendix H.)

FINAL EVALUATION REPORT

PLANNING, MONITORING, AND IMPLEMENTATION (PMI)
EVALUATION MODEL FOR DECISION-MAKING

Reporting Form

Goal: To develop and implement a program to improve instruction in the basic skills of reading and mathematics which supports, strengthens and augments the regular school program; and to provide resource development for mathematics teachers who do not hold certification in their field.

Objective D: As a result of participation in staff development events through the Mathematics Teacher Resource Development component of the Improving Basic Skills in Reading and Mathematics program, project teachers of mathematics, pre K-12, will improve their competencies in classroom management and planning for instruction.

PART I

INPUTS

INTENDED	STATUS	OBSERVED
Inputs are the same as those listed for Objective C, except for input g.		
g. Mathematics teachers pre K-12 in the DCPS	Agreement	g. The listing of pre K-12 mathematics teachers participating in DCPS' staff development activities was examined by the evaluation manager.

OBJECTIVE D

PART II

PROCESSES †

INTENDED	STATUS	OBSERVED
1.1 The project coordinator will conduct a needs survey for planning staff development events (workshops, college courses, in-services, mini-seminars and individual counseling) in the area of mathematics.	Agreement	1.1 The project coordinator conducted a needs assessment in Spring 1985. The needs assessment was done to aid in the planning of staff development activities for the SY 1985-86.
1.2 The project coordinator will identify resources in the community to provide staff development events to meet the assessed needs.	Agreement	1.2 Involved community resources included the Smithsonian Institute and one retired resource teacher who was used as a facilitator. Also, the services of some publishing companies were used. The publishing companies included: Holt, Rhinehart & Winston; Harper & Row; and Harcourt Brace & Jovanovich.
1.3 The project coordinator will design staff development activities.	Agreement	1.3 Five courses were designed as staff development mathematics inservices. They were: Varying Teaching Styles, Planning for Effective Instruction, Creative Problem Solving, Managing Behaviors in the Classroom and the Saturday Lecture Series-- A History of Mathematics. A class roster of the mathematics inservices was examined by the evaluation manager.

† Processes numbered to correspond with outcomes

OBJECTIVE D

PART II (continued)

PROCESSES †

INTENDED	STATUS	OBSERVED
1.4 The project staff will recruit participants through activities, such as the announcement of events.	Agreement	1.4 Informational materials disseminated included District Education and Math Angles. copies of all disseminated materials are in the project coordinator's office.
2.1 The project staff will monitor registration, instruction and support needs.	Agreement	2.1 The project coordinator began monitoring in August 1985. In addition, the project coordinator has documentation of instructional support visits to participant teachers.
2.2 The project staff will assist in instruction, as needed.	Agreement	2.2 The project coordinator conducted four staff development courses listed under Process 1.3. The Saturday Lecture Series was taught by the curator of the Smithsonian Museums.
2.3 Teachers will attend the events offered through this program with records kept of attendance.	Agreement	2.3 Examples of class rosters were examined by the evaluation manager.
3.1 The project coordinator will provide for counseling with project teachers who request help in the areas of classroom management and planning for instruction. The project coordinator will keep records of the counseling contacts.	Agreement	3.1 Conference notes and observation notes are kept in appropriate school folders.

† Processes numbered to correspond with outcomes

OBJECTIVE D

PART II (continued)

PROCESSES †

INTENDED	STATUS	OBSERVED
3.2 Teachers attending events, courses and seminars will complete evaluation forms giving their perception of their improvement in the areas of classroom management and planning for instruction.	Agreement	3.2 The project coordinator has adapted an evaluation form regarding teachers' perceptions of their improvement as to classroom management and planning for instruction. A copy of this evaluation form is in the ECIA Chapter 2 evaluation office.

† Processes numbered to correspond with outcomes

OBJECTIVE D

PART III

OUTCOMES

INTENDED	STATUS	OBSERVED
1. An examination of records, submitted by June 1986 to the ECIA Chapter 2 evaluation office by the project coordinator, will show that a plan of action, reflecting needs of mathematics teachers (pre K-12) and available resources, is on file at the Instructional Services Center.	Agreement	1. Included in the Program Work Plan was an assessment of elementary and secondary mathematics teacher needs. This needs assessment was done in the Spring of 1985 to prepare staff development inservices for the SY 1985-86. Both elementary resource teachers and secondary mathematics teachers indicated their choice of topics that had previously been proposed for staff development activities that would relate to their mathematics needs in particular. Three topics were of most concern for the group of elementary resource teachers. They were: o The Bridge from Concrete Numbers to Abstract o Teaching for Remediation o Motivation in Mathematics The two topics of most concern to secondary mathematics teachers were: o Problem Solving o Remediation (The summary of the survey results are in Appendix G.)

OBJECTIVE D

PART III (continued)

OUTCOMES

INTENDED	STATUS	OBSERVED
2. An analysis of grades of participants in the Summer Institute and school year inservices, submitted by June 1986 to the ECIA Chapter 2 evaluation office by the project coordinator, will show that at least 80% of the participants have attained the competency level designated by the instructor as successful.	Partial Agreement	2. Every participant in the staff development inservices and the Summer Institute was recorded as having reached the competency level if he or she completed the course. Below are the percentages of participants in each course attaining the competency level. 57% - Varying Teaching Styles (4 of 7) 83% - Planning for Effective Instruction (5 of 6) 57% - Creative Problem Solving (4 of 7) 89% - Managing Behaviors in the Classroom (8 of 9) 91% - A History of Mathematics (10 of 11) 100% - Applying Research in Elementary Mathematics Education (12 of 12) 100% - Applying Research in Secondary Mathematics Education (10 of 10) 92% - Probability and Statistics Summer Institute (11 of 12). Over all staff development courses, 82% of the participants attained the competency level designated by the instructors as successful (completion of coursework).

OBJECTIVE D

PART III (continued)

OUTCOMES

INTENDED	STATUS	OBSERVED
3. An analysis of questionnaires of participants in all varieties of staff development events, submitted by June 1986 to the ECIA Chapter 2 evaluation office by the project coordinator, will show an above average mean rating by project participants on their perception of their improvement in the areas of classroom management and planning for instruction.	Agreement	3. Teachers participating in staff development inservices filled out feedback surveys indicating their ratings of selected elements of the staff development activities. Each staff development course element was rated on a Likert scale from 1 to 5, with 5 being the most positive rating. Forty-six out of a possible 62 surveys were returned by teachers enrolled in staff development courses, excluding the Summer Institute. (For the summary of the percentage statistics, see Appendix J.) o Eighty-nine percent (89%) of the responding participants thought the manner in which the information was presented was intensive and exciting. On a scale of 1 to 5, their average rating was 4.3. o Ninety-one percent (91%) of the teachers indicated that the presentation was clear. The average rating was 4.4. o Eighty-nine percent (89%) of the responding teachers thought that the staff development course was useful. Their average rating was 4.4.

OBJECTIVE D

PART III (continued)

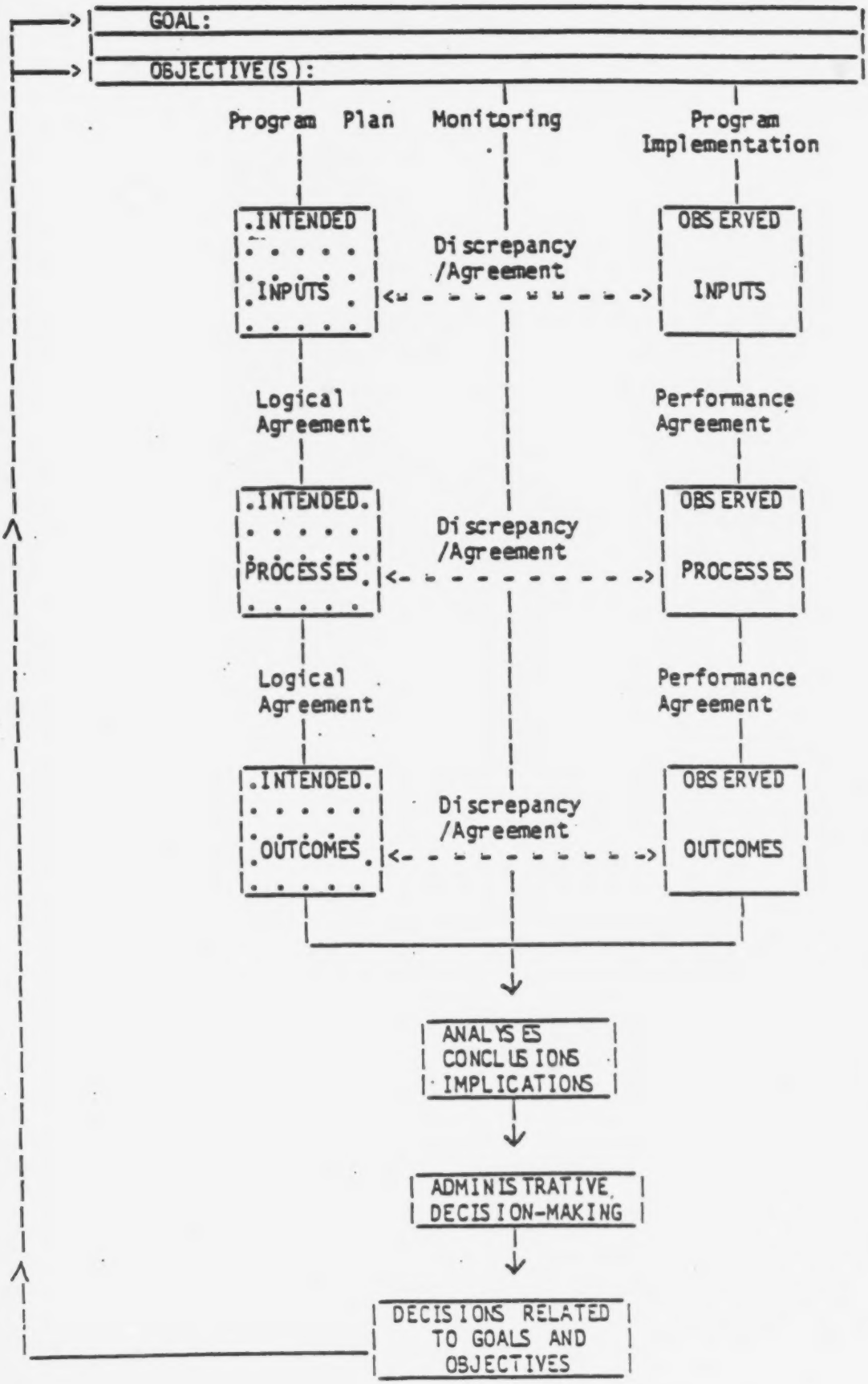
OUTCOMES

INTENDED	STATUS	OBSERVED
		3. (continued) o Ninety-one percent (91%) of the participants thought that the courses brought about, maintained or increased their interest on the topic. The average rating was 4.4. o Ninety-four percent (94%) of the responding teachers indicated that the course objectives were met. Their average rating was 4.5. o Eighty-six percent (86%) of the responding participants in the staff development inservices were satisfied with their improvement in classroom management. The mean rating was 4.2, out of a possible 5.0. o Eighty-four percent (84%) of the participants were satisfied with their improvement in planning for instruction, with the average rating being 4.3.

APPENDIX A

PLANNING, MONITORING, AND IMPLEMENTING (PMI) EVALUATION MODEL FOR DECISION-MAKING

EVALUATION MODEL SCHEMA



APPENDIX B

RESULTS OF CRITERION-REFERENCED AND NORM-REFERENCED STANDARDIZED TESTS IN READING AND MATHEMATICS

The Prescriptive Reading Inventory

N = 311*

GRADE LEVEL	7TH	8TH	9TH	NOT INDICATED	TOTAL
Number of Students	192	108	11	0	311
Percent of Students Showing Improvement	74%	86%	91%	0	79%

THE ENRIGHT MATHEMATICS INVENTORY

N = 259*

GRADE LEVEL	7TH	8TH	9TH	NOT INDICATED	TOTAL
Number of Students	31	10	6	211	259
Percent of Students Showing Improvement	97%	100%	100%	98.6%	98.5%

* All students for whom both pre- and post-tests were submitted.

CALIFORNIA TESTS OF BASIC SKILLS (CTBS)

PERCENTILE RANKING OF AVERAGE TOTAL READING RAW SCORES

N = 475*

		JUNE 1985 (PRE-TEST)	JUNE 1986 (POST-TEST)
PRE-POST GRADE LEVELS	NUMBER OF STUDENTS	PERCENTILE RANKING	PERCENTILE RANKING
GRADE 6 - GRADE 7	273	44	37
GRADE 7 - GRADE 8	151	34	39
GRADE 8 - GRADE 9	51	29	31

PERCENTILE RANKING OF AVERAGE TOTAL MATHEMATICS RAW SCORES

N = 472*

		JUNE 1984 (PRE-TEST)	JUNE 1985 (PRE-TEST)
PRE-POST GRADE LEVELS	NUMBER OF STUDENTS	PERCENTILE RANKING	PERCENTILE RANKING
GRADE 6 - GRADE 7	271	56	47
GRADE 7 - GRADE 8	150	44	36
GRADE 8 - GRADE 9	51	33	34

* All project students reported who had CTBS reading and mathematics scores for both the Spring of 1985 and 1986.

APPENDIX C

BASIC SKILLS MONITORING GUIDE

BASIC SKILLS MONITORING GUIDE

SCHOOL: _____ TEACHER: _____

DATE: _____ OBSERVER: _____

	Yes	No	COMMENTS
A. CLASSROOM ENVIRONMENT:			
1. Does the environment reflect a focus on basic skills?			
2. Are the objectives for instruction displayed?			
3. Does the environment provide for flexible grouping?			
4. Does the environment reflect an activity-oriented laboratory concept?			
B. INSTRUCTION:			
1. Is there evidence of collaborative planning with regular subject area teacher?			
2. Is there evidence of pre-assessment?			
3. Is there evidence that CBC Curriculum objectives are being utilizied?			
4. Were the objectives for instruction stated clearly and concisely?			
5. Did the students understand the objective?			
6. Did the students respond favorably to stated objectives?			
7. Are the learning activities appropriate for the students?			

B. INSTRUCTION: (continued)

8. Are the students actively involved in their learning?
9. Is there evidence of instructional options to help in the achievement of the objective?
10. Is there evidence of assessment of mastery after instruction?
11. Is there evidence of the use of supplementary and manipulative materials in instruction?

C. CLASSROOM MANAGEMENT:

1. Is there evidence of systematic recordkeeping and reporting strategies
2. Are student progress records available to the regular subject area teacher, to student and/or parent for review?
3. Was there orderly closure to the lesson?
4. Were appropriate follow-up activities given?
5. Was there evidence of home/school communication?

Yes	No	COMMENTS

APPENDIX D

TEACHER EVALUATION OF THEIR PERCEIVED EFFECTS
OF THE BASIC SKILLS PROGRAM AND OF
THEIR APPLICATION OF THE PROGRAM

ECIA Chapter 2

Improving Basic Skills in
Reading and Mathematics

Teacher Evaluation

Name _____ Date _____

School _____ Subject _____

As part of our evaluation of the ECIA Chapter 2 Basic Skills program, we are asking your help in rating two areas of the program: your application of the program and your opinion of the effects of the program.

Please complete each item in this form by circling a number from 1 to 5, with 1 representing the minimum and 5 representing the maximum.

1. EFFECT OF PROGRAM	Negative				Positive
a. Impact on students' achievement	1	2	3	4	5
b. Impact on students' attitudes	1	2	3	4	5
c. Impact on teachers' attitudes	1	2	3	4	5
2. APPLICATION	Not at all				Totally
a. Extent to which you adapted materials to special needs of students	1	2	3	4	5
b. Extent to which you adapted strategies to special needs of students	1	2	3	4	5

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Prepared by
Division of Quality Assurance

APPENDIX E

TEACHER RATINGS OF PROJECT WORKSHOPS

TEACHER RATINGS OF PROJECT WORKSHOPS

"ORIENTATION WORKSHOP"

N = 25

RATED CRITERIA	EXCELLENT (5)		VERY GOOD (4)		ADEQUATE (3)		LESS THAN ADEQUATE (2)		NOT APPLICABLE (1)		AVERAGE RATING
	#	%	#	%	#	%	#	%	#	%	
OBJECTIVES	19	79	5	21	0	0	0	0	0	0	4.79
CONTENT	22	88	3	12	0	0	0	0	0	0	4.88
MATERIALS	19	76	5	20	1	4	0	0	0	0	4.72
ORGANIZATION/ FORMAT	19	79	4	17	1	4	0	0	0	0	4.75
POSSIBILITY FOR USE OF EXPERIENCES	22	88	3	12	0	0	0	0	0	0	4.88

"MATHEMATICS WORKSHOP"

N = 19

RATED CRITERIA	EXCELLENT (5)		VERY GOOD (4)		ADEQUATE (3)		LESS THAN ADEQUATE (2)		NOT APPLICABLE (1)		AVERAGE RATING
	#	%	#	%	#	%	#	%	#	%	
OBJECTIVES	9	47.4	8	42.1	2	10.5	0	0	0	0	4.37
CONTENT	11	57.9	5	26.3	3	15.8	0	0	0	0	4.42
MATERIALS	11	57.9	5	26.3	3	15.8	0	0	0	0	4.42
ORGANIZATION/ FORMAT	11	57.9	6	31.6	2	10.5	0	0	0	0	4.47
POSSIBILITY FOR USE OF EXPERIENCES	11	57.9	5	26.3	3	15.8	0	0	0	0	4.42

TEACHER RATINGS OF PROJECT WORKSHOPS

"READING WORKSHOP"

N = 24

RATED CRITERIA	EXCELLENT (5)		VERY GOOD (4)		ADEQUATE (3)		LESS THAN ADEQUATE (2)		NOT APPLICABLE (1)		AVERAGE RATING
	#	%	#	%	#	%	#	%	#	%	
OBJECTIVES	22	95.8	1	4.2	0	0	0	0	0	0	4.96
CONTENT	23	95.8	1	4.2	0	0	0	0	0	0	4.96
MATERIALS	19	90.5	2	9.5	0	0	0	0	0	0	4.74
ORGANIZATION/ FORMAT	23	95.8	1	4.2	0	0	0	0	0	0	4.96
POSSIBILITY FOR USE OF EXPERIENCES	22	95.8	1	4.2	0	0	0	0	0	0	4.96

APPENDIX F

RESULTS OF THE TEACHER EVALUATION
OF THE BASIC SKILLS PROGRAM

TEACHER EVALUATION OF THE EFFECT AND
APPLICATION OF THE BASIC SKILLS PROGRAM

LIKERT-SCALE

EFFECT OF PROGRAM	(5) POSITIVE		(4)		(3)		(2)		(1) NEGATIVE		AVERAGE RATING
	#	%	#	%	#	%	#	%	#	%	
A. IMPACT ON STUDENTS' ACHIEVEMENT	17	55	10	32	4	13	0	0	0	0	4.42
B. IMPACT ON STUDENTS' ATTITUDES	15	48	13	42	3	10	0	0	0	0	4.39
C. IMPACT ON TEACHERS' ATTITUDES	20	64	7	23	4	13	0	0	0	0	4.52

APPLICATION	(5) POSITIVE		(4)		(3)		(2)		(1) NEGATIVE		AVERAGE RATING
	#	%	#	%	#	%	#	%	#	%	
A. EXTENT TO WHICH YOU ADAPTED MATERIALS TO SPECIAL NEEDS OF STUDENTS	18	58	9	29	3	10	1	3	0	0	4.42
B. EXTENT TO WHICH YOU ADAPTED STRATEGIES TO SPECIAL NEEDS OF STUDENTS	18	58	10	32	2	7	1	3	0	0	4.45

APPENDIX G

NEEDS ASSESSMENT OF MATHEMATICS TEACHERS

Elementary Resource Teachers
SY 1985 - 86

The following topics have been proposed for staff development during SY 1985-86. Check the ones which represent needs that you have. Please feel free to add others that may not be listed. Thank you.

I Mathematical Development: The Children

1 Mathematics in Kindergarten (What areas of content should be emphasize.)

9 The Bridge from Concrete to Abstract (What to do when students have no abstract sense of numbers.)

2 Counting Strategies (How to get 1st graders to count from starting points other then zero and to use the skill in problem solving.)

2 The Role of Manipulatives (Where do they work best.)

1 Measurement (How should it be taught and how soon.)

II Mathematics Development: The Teacher's Role

3 Diagnosis: Taking the Mathematical Pulse (How to do it painlessly.)

8 Teaching for Remediation (What to do with multiple repeaters.)

3 Evaluation I (How to use pretest data for placement.)

1 Evaluation II (Testing for mastery and how to recognize it.)

8 Motivation in Mathematics (How to keep going while helping those behind to catch-up.)

III Instructional Strategies

6 Meaningfulness (How to help students retain concepts.)

2 Drill and Practice (When and how much is enough.)

2 Grouping (How to give youngsters the best chance for success.)

3 Individual Styles and Individual Needs (How to meet them effectively.)

3 Algorithms (What's their role and how can learning them be easier.)

IV Curriculum

5 Mathematical Problem Solving (How to make it more then just a matter of words.)

3 Estimation and Mental Arithmetic (How and when to check for reasonableness.)

-OVER-

Elementary Resource Teachers
SY 1985-86

3 Calculators in the classroom (How young can students be to use them.)

1 Sequencing in the Curriculum (How to keep it appropriate.)

2 The Teacher and the Textbook (In which directions and for which topics should the text be supplemented.)

V Other Activities for gifted mathematics students

Mathematics projects for exhibits and science fairs

Secondary Mathematics Teachers
SY 1985 - 86 Survey

The following topics have been proposed for staff development during SY 1985-86. Check the ones which represent needs that you have and add those others which are not listed. Thank you.

17 Effective Teaching (What factors affect student attitudes toward learning mathematics?)

34 Individual Differences Among Learners (How should you deal with differences in learning styles and levels of development?)

19 Communicating Mathematics (How precise should you be in your use of mathematical language?)

36 Remediation (How do you teach students who are 3 and 4 grades below in their skills?)

42 Problem Solving (How do you get students to be persistent and successful problem solvers?)

5 Estimation (What kind of instruction should be done?)

18 Calculators (How do you use them to enhance learning at the secondary level?)

6 Understanding Fractions (How do you get students to transfer skills particular in the context of algebraic equations?)

29 The Learning and Teaching of Algebra (What are the levels of understanding and how do you help students bridge them to adapt algebraic techniques?)

25 The Learning and Teaching of Geometry (How do you convince students about the value of traditional deductive geometry?)

27 Constructing Proofs (How do you get students to analyze questions or problems well enough to discover a starting point?)

___ Other (Please list each on a separate line.)

Math Projects: How to generate creative activities

SAT preparation on the computer(mathematics)

What to do about students whose records show mastery but their performance does not

What to do about students who near 6 grades below grade level(30 in a class/45 min.)

APPENDIX H

FACULTY EVALUATION FORMS

FACULTY EVALUATION FORM

COLLEGE OF PHYSICAL SCIENCE, ENGINEERING AND TECHNOLOGY

STUDENT QUESTIONNAIRE

INSTRUCTOR Mr. Davis CLASS Intro. to Computer Science I SEMESTER Fall

This form offers you the opportunity to convey to your instructor and his/her department your comments and suggestions regarding his/her classroom performance. Please make your rating and comments as accurate as possible. THE INSTRUCTOR WILL NOT SEE THIS INFORMATION UNTIL GRADES HAVE BEEN SUBMITTED TO THE REGISTRAR'S OFFICE AT THE END OF THE SEMESTER.

DIRECTION: Opposite each characteristic listed, place a circle around the most appropriate rating. Symbols and their meanings are:

A = EXCELLENT B = GOOD C = SATISFACTORY D = MARGINAL

F = UNSATISFACTORY G = NOT APPLICABLE

		N = 8 Means	Rating 5 4 3 2 1 N/A
1.	Ability to create interest in the subject matter and to stimulate thinking.	3.1	A B C D E F G
2.	Overall planning and knowledge of the course.	1.9	A B C D E F G
3.	Ability to explain complex subject matter.	2.0	A B C D E F G
4.	Adequate instructions given prior to the start of a new procedure.	2.0	A B C D E F G
5.	Answering questions promptly and completely.	2.3	A B C D E F G
6.	Willingness to assist students.	4.0	A B C D E F G
7.	Impartiality and fairness in dealings with students.	4.5	A B C D E F G
8.	Fairness in structure and grading of tests.	3.0	A B C D E F G
9.	Return of papers within a reasonable amount of time.	4.1	A B C D E F G
10.	Punctual in meeting class.	3.4	A B C D E F G
11.	Clear and distinct speech.	4.8	A B C D E F G
12.	Considering everything how would you rate the instructor?	2.5	A B C D E F G

FACULTY EVALUATION FORM

COLLEGE OF PHYSICAL SCIENCE, ENGINEERING AND TECHNOLOGY

STUDENT QUESTIONNAIRE

INSTRUCTOR Mr. Black CLASS Precalculus I SEMESTER Fall

This form offers you the opportunity to convey to your instructor and his/her department your comments and suggestions regarding his/her classroom performance. Please make your rating and comments as accurate as possible. THE INSTRUCTOR WILL NOT SEE THIS INFORMATION UNTIL GRADES HAVE BEEN SUBMITTED TO THE REGISTRAR'S OFFICE AT THE END OF THE SEMESTER.

DIRECTION: Opposite each characteristic listed, place a circle around the most appropriate rating. Symbols and their meanings are:

A = EXCELLENT B = GOOD C = SATISFACTORY D = MARGINAL

F = UNSATISFACTORY G = NOT APPLICABLE

		N = 10	Rating						
		Means	5	4	3	2	1	N/A	
1.	Ability to create interest in the subject matter and to stimulate thinking.	3.8	A	B	C	D	E	F	G
2.	Overall planning and knowledge of the course.	3.3	A	B	C	D	E	F	G
3.	Ability to explain complex subject matter.	3.5	A	B	C	D	E	F	G
4.	Adequate instructions given prior to the start of a new procedure.	3.1	A	B	C	D	E	F	G
5.	Answering questions promptly and completely.	3.4	A	B	C	D	E	F	G
6.	Willingness to assist students.	3.2	A	B	C	D	E	F	G
7.	Impartiality and fairness in dealings with students.	4.4	A	B	C	D	E	F	G
8.	Fairness in structure and grading of tests.	2.9	A	B	C	D	E	F	G
9.	Return of papers within a reasonable amount of time.	1.6	A	B	C	D	E	F	G
10.	Punctual in meeting class.	2.8	A	B	C	D	E	F	G
11.	Clear and distinct speech.	2.9	A	B	C	D	E	F	G
12.	Considering everything how would you rate the instructor?	3.2	A	B	C	D	E	F	G

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FACULTY EVALUATION FORM

COLLEGE OF PHYSICAL SCIENCE, ENGINEERING AND TECHNOLOGY

STUDENT QUESTIONNAIRE

INSTRUCTOR Mr. Means CLASS Intro. to Computer Science II SEMESTER Spring

This form offers you the opportunity to convey to your instructor and his/her department your comments and suggestions regarding his/her classroom performance. Please make your rating and comments as accurate as possible. THE INSTRUCTOR WILL NOT SEE THIS INFORMATION UNTIL GRADES HAVE BEEN SUBMITTED TO THE REGISTRAR'S OFFICE AT THE END OF THE SEMESTER.

DIRECTION: Opposite each characteristic listed, place a circle around the most appropriate rating. Symbols and their meanings are:

A = EXCELLENT B = GOOD C = SATISFACTORY D = MARGINAL

F = UNSATISFACTORY G = NOT APPLICABLE

		N = 7 Means	Rating 5 4 3 2 1 N/A
1.	Ability to create interest in the subject matter and to stimulate thinking.	4.7	A B C D E F G
2.	Overall planning and knowledge of the course.	4.7	A B C D E F G
3.	Ability to explain complex subject matter.	4.1	A B C D E F G
4.	Adequate instructions given prior to the start of a new procedure.	4.6	A B C D E F G
5.	Answering questions promptly and completely.	4.6	A B C D E F G
6.	Willingness to assist students.	4.7	A B C D E F G
7.	Impartiality and fairness in dealings with students.	5.0	A B C D E F G
8.	Fairness in structure and grading of tests.	5.0	A B C D E F G
9.	Return of papers within a reasonable amount of time.	5.0	A B C D E F G
10.	Punctual in meeting class.	5.0	A B C D E F G
11.	Clear and distinct speech.	4.9	A B C D E F G
12.	Considering everything how would you rate the instructor?	4.9	A B C D E F G

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FACULTY EVALUATION FORM
COLLEGE OF PHYSICAL SCIENCE, ENGINEERING & TECHNOLOGY

STUDENT QUESTIONNAIRE

FORM 300

INSTRUCTOR Mr. Tippett COURSE Pre-Calculus II SEMESTER Spring

This form offers you the opportunity to convey to your instructor and his/her department your comments and suggestions regarding his/her classroom performance. Please make your rating and comments as accurate as possible. THE INSTRUCTOR WILL NOT SEE THIS INFORMATION UNTIL GRADES HAVE BEEN SUBMITTED TO THE REGISTRAR'S OFFICE AT THE END OF THE SEMESTER.

DIRECTION: Opposite each characteristic listed, place a circle around the most appropriate rating. Symbols and their meanings are:

A = EXCELLENT B = GOOD C = SATISFACTORY D = MARGINAL

F = UNSATISFACTORY G = NOT APPLICABLE

N = 12

CHARACTERISTIC	RATING Means	5 4 3 2 1 N/A
1. Mastery of the subject matter.	4.8	A B C D F G
2. Ability to explain and simplify complex concepts.	4.0	A B C D F G
3. Ability to create interest in the subject matter and to stimulate thinking.	4.2	A B C D F G
4. Willingness to assist students.	3.1	A B C D F G
5. Fairness in dealing with students.	3.4	A B C D F G
6. Acceptance of questions during lecture.	3.5	A B C D F G
7. Promptness in meeting and dismissing classes.	4.1	A B C D F G
8. Course objectives made known at the beginning of the course.	4.5	A B C D F G
9. Lecture and relevant to course objectives	4.5	A B C D F G
10. Effectiveness of lectures.	3.6	A B C D F G
11. Method of grading explained.	4.4	A B C D F G
12. Fairness in grading exams and course work.	3.7	A B C D F G
13. Exams questions and results reviewed with class or individuals.	4.2	A B C D F G
14. Reviews exams questions and results with class or individuals.	3.6	A B C D F G
15. Appropriate supplemental learning aids (handouts, homework assignments, audiovisual aids, etc.) used.	3.8	A B C D F G

FACULTY EVALUATION FORM
COLLEGE OF PHYSICAL SCIENCE, ENGINEERING & TECHNOLOGY

STUDENT QUESTIONNAIRE

FORM 300

INSTRUCTOR Mr. Kabir COURSE Calculus II SEMESTER Spring

This form offers you the opportunity to convey to your instructor and his/her department your comments and suggestions regarding his/her classroom performance. Please make your rating and comments as accurate as possible. THE INSTRUCTOR WILL NOT SEE THIS INFORMATION UNTIL GRADES HAVE BEEN SUBMITTED TO THE REGISTRAR'S OFFICE AT THE END OF THE SEMESTER.

DIRECTION: Opposite each characteristic listed, place a circle around the most appropriate rating. Symbols and their meanings are:

A = EXCELLENT B = GOOD C = SATISFACTORY D = MARGINAL

F = UNSATISFACTORY G = NOT APPLICABLE

N = 5

CHARACTERISTIC	Means	RATING 5 4 3 2 1 N/A
1. Mastery of the subject matter.	4.2	A B C D F G
2. Ability to explain and simplify complex concepts.	4.2	A B C D F G
3. Ability to create interest in the subject matter and to stimulate thinking.	4.4	A B C D F G
4. Willingness to assist students.	4.6	A B C D F G
5. Fairness in dealing with students.	4.4	A B C D F G
6. Acceptance of questions during lecture.	4.8	A B C D F G
7. Promptness in meeting and dismissing classes.	4.0	A B C D F G
8. Course objectives made known at the beginning of the course.	4.2	A B C D F G
9. Lecture and relevant to course objectives	4.2	A B C D F G
10. Effectiveness of lectures.	4.8	A B C D F G
11. Method of grading explained.	3.6	A B C D F G
12. Fairness in grading exams and course work.	4.2	A B C D F G
13. Exams questions and results reviewed with class or individuals.	4.2	A B C D F G
14. Reviews exams questions and results with class or individuals.	4.4	A B C D F G
15. Appropriate supplemental learning aids (handouts, homework assignments, audiovisual aids, etc.) used.	3.8	A B C D F G

APPENDIX I

SUMMARY EVALUATION OF CERTIFICATION COURSES

SUMMARY EVALUATION
CONTENT CERTIFICATION

PLEASE COMPLETE THIS EVALUATION SO THAT WE CAN BETTER DESIGN FUTURE COURSES TO SERVICE THE NEEDS OF TEACHERS.

Date: SY 1985-86

Name: Teachers who completed certification courses (Optional) School _____ Route # ____

USE A SCALE OF 1 TO 5 (1=LOW; 5=HIGH) TO RATE THE FOLLOWING:

N = 6
Means

3.3 1. HOW WELL THE COURSES MET YOUR EXPECTATION.
COMMENTS:

3.8 2. YOUR LEARNING OF SUBJECT MATTER.
COMMENTS:

3.2 3. USEFULNESS OF THE COURSES TO YOU FOR CLASSROOM APPLICATION.
COMMENTS:

3.8 4. CAPABILITY OF THE INSTRUCTORS.
COMMENTS:

4.0 5. YOUR MOTIVATION TO COMPLETE THE COURSE WORK.
COMMENTS:

3.4 6. POSITIVE CHANGE IN YOUR ATTITUDE ABOUT MATHEMATICS.
COMMENTS:

- my motivation has always been high

3.7 7. INCREASED FEELINGS OF COMPETENCE FOR TEACHING MATHEMATICS.
COMMENTS:

- with each course, my knowledge and feelings for math increased.

8. WHAT WAS MOST HELPFUL TO YOU IN THE COURSES?
- certification
- good instructors
- availability and location of courses

9. WHAT WAS LEAST HELPFUL TO YOU IN THE COURSES?
- having to wait 1½ years for a course
- location
- the attitude and teaching style of one instructor

10. ANY OTHER COMMENTS ABOUT THE COURSES?
COMMENTS:

- all of the instructors were prepared and helpful in giving individual attention.

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APPENDIX J

EVALUATION SUMMARY OF INSERVICES

IMPROVING BASIC SKILLS

FEEDBACK SURVEY FOR Summary of Inservices
(Fill in Title of Course)

Instructions: Please rate each of the following items by circling a number from 5 to 1, with the highest rating to the left.

N = 46

Mean

1. The manner in which the information was presented was:

Exciting 5	4	3	2	Dull 1	Mean
18 (40%)	22 (49%)	4 (9%)	1 (2%)		4.3

2. The clarity of the presentation was:

Very Clear 5	4	3	2	Very Unclear 1	Mean
22 (48%)	20 (43%)	4 (9%)			4.4

3. The value of the course to me was:

Extremely Useful 5	4	3	2	Practically Useless 1	Mean
22 (48%)	19 (41%)	5 (11%)			4.4

4. The courses brought about, maintained, or increased my interest in the topic:

Very Much 5	4	3	2	Not At All 1	Mean
24 (52%)	18 (39%)	4 (9%)			4.4

5. The course objectives were met:

Very Much 5	4	3	2	Not At All 1	Mean
28 (62%)	14 (31%)	2 (4%)	1 (2%)		4.5

6. As a result of this course how satisfied are you with your improvement in:

	High Degree 5	4	3	2	Low Degree 1	Mean
a. classroom management	14 (39%)	17 (47%)	4 (11%)		1 (3%)	4.2
b. planning for instruction	21 (49%)	15 (35%)	6 (14%)	1 (2%)		4.3

7. Please list any other areas in which you would like further staff development courses.